

# TITLE: Comparison of the Performance of VIA and Pap smear among Premenopausal Women

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## Abstract

### BACKGROUND:

Pap smear screening cytological method has markedly reduced cervical cancer mortality in high income countries. However, in low income counties there is still high cervical cancer related mortality as a result of absence of implementation of pap smear screening services.

For this reason visual inspection with acetic acid (VIA) is a feasible alternative based on evidence from community based study.

The World Health Organization recommended either VIA or pap smear as triaging tests following a positive HPV test among women aged 30-50 years.

### OBJECTIVE:

To compare diagnostic performance of VIA, and Pap smear cytology as screening tests for cervical cancer among women aged 30-50years

### DESIGN:

This was a community based crossectional study. The community based design reduced bias associated with a facility based design

### METHODS:

It was conducted in Amukpe, Sapele Local Government Area, of Delta State, Nigeria. Ethical approval was obtained from the Health Research Ethics Committee of Delta State University Teaching Hospital, Oghara, Delta State, Nigeria.

Participants were 248 consenting premenopausal women between 30years and 50 years old.

Postmenopausal women were excluded because of regression of the transformation zone of the cervix into the endocervical canal which may increase the false negative results for VIA.

All participants had Pap smear, VIA and Colposcopy. None of the women with abnormal results consented to an offered biopsy for confirmation with histology. Colposcopy thus was used as the gold standard. The data collected were inputted into SPSS version 22 and analysed.

### RESULT:

The sensitivity, specificity, PPV, NPV, accuracy and AUC for VIA were 53.8%, 98.0%, 63.6%, 97.0%, 95.3% and 0.7591 respectively. Pap smear had sensitivity, specificity, `PPV, NPV, accuracy and AUC of 84.6%, 85.4%, 27.5%, 98.8%, 83.5% and 0.5037 respectively.

### CONCLUSION:

VIA had better specificity, NPV, accuracy and AUC in comparison to Pap smear. While Pap smear had a higher sensitivity and PPV. VIA had a better diagnostic performance.

**KEYWORDS:** Cervical cancer screening, VIA, Pap smear cytology, diagnostic accuracy.